CLAIMS:

- 1. A multi-stack optical data storage medium for recording using a focused radiation beam having a wavelength λ and entering through an entrance face of the medium during recording, comprising at least:
- a first substrate with present on a side thereof:
- 5 a first recording stack named L₀, comprising a recordable type L₀ recording layer, and a first reflective layer present between the L₀ recording layer and the first substrate,
 - a second substrate with present on a side thereof:
- a second recording stack named L_1 comprising a recordable type L_1 recording layer having a thickness t_{RL1} and a complex refractive index $n_{\lambda} i * k_{\lambda}$ at the wavelength λ , a second reflective layer present adjacent the L_1 recording layer at a side most remote from the entrance face, and said second recording stack L_1 being present at a position closer to the entrance face than the L_0 recording stack,
 - a spacer layer, transparent for the radiation beam, sandwiched between the recording stacks, said transparent spacer layer having a thickness substantially larger than the depth of focus of the focused radiation beam,

characterized in that the second reflective layer mainly comprises the metal Cu and has a thickness t_{MLn} selected from the range of 8 - 20 nm and the thickness t_{RL1} and k_{λ} of the recordable L_1 recording layer fulfils the formula $t_{RL1}*k_{\lambda} \leq 8$ nm.

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- 2. A multi-stack optical data storage medium according to claim 1, wherein the recordable type L_1 recording layer comprises an organic dye.
- 3. A multi-stack optical data storage medium according to claim 2, wherein t_{RL1} is selected from the range of 70 125 nm.
 - 4. A multi-stack optical data storage medium according to claim 2, wherein a first auxiliary layer, transparent for the radiation beam and with a thickness smaller than 15 nm, is present sandwiched between the second reflective layer and the spacer layer.

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- 5. A multi-stack optical data storage medium according to claim 2 or 4, wherein a second auxiliary layer, transparent for the radiation beam and with a thickness smaller than 15 nm, is present sandwiched between the second reflective layer and the L_1 recording layer.
- 6. A multi-stack optical data storage medium according to claim 4 or 5, wherein the auxiliary layer comprises a material selected from the group of oxides and nitrides of silicon.

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10 7. Use of an optical data storage medium as claimed in any one of the preceding claims for multi stack recording wherein the second recording stack L₁ has a reflectivity level of more than 18% and a transmission level of more than 50%.